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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/409,681	09/30/1999	KEIICHI SODA	2611-0114P	5738

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[REDACTED] EXAMINER

PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 10/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	N
	09/409,681	SODA ET AL.	
	Examiner	Art Unit	
	Justin M Philpott	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 9/30/1999.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3, 10, 13 and 22 is/are rejected.
- 7) Claim(s) 4-9, 11-12 and 14-21 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 September 1999 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed September 30, 1999 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. Specifically, foreign document number 157032 does not include an explanation of relevance. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

3. The drawings are objected to for reasons cited on Form PTO-948 enclosed herein. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. Furthermore, Figures 16-18 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing

Art Unit: 2665

correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following minor informalities: “deader” (p.12, line 5 and also p.81, line 15) should be changed to “header”, “receiving” (p.32, line 14) should be changed to “received”, a space should be inserted after “24” (p.34, line 8), and “a” should be inserted before “number” (p.79, line 11). Appropriate correction is required.

6. Additionally, the lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

7. Claims 3, 9 and 15 are objected to because of the following minor informalities: “mater-destined” (p. 101, line 12) should be changed to “master-destined”, “devises” (p. 105, line 10) should be changed to “devices”, and “tim” (p. 110, line 25) should be changed to “time”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 3, 10, 13 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "any one of said ma[s]ter-destined general information receiving units" (p. 101, line 12) in claim 2. There is insufficient antecedent basis for this limitation in the claim. This rejection may be overcome by changing the above-cited term to the singular form, i.e., "said master-destined general information unit".

Claims 10 and 13 recite the limitation "said packet multiplexers" (p. 106, line 5 and p. 108, line 19) in claim 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "the specified period of time during which output of the specific information from each device is inhibited" (p. 116, line 4) in claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's prior art FIGS. 16-18 in view of U.S. Patent No. 5,627,832 to Tanaka et al.

Regarding claim 1, FIGS. 16-18 teach a master device (1) and a plurality of slave devices (2, each connected to respective slave-side ports 12) connected to each other through at least one unit of multiplexer in a tree form (packet multiplexer 8) with the master device at the vertex for transmitting and receiving various types of specific information having a fixed length (via specific packet multiplexing bus 15) to and from the devices each other.

FIGS. 16-18, however, do not specifically disclose the master device specifying slave devices according to a round-robin and also do not disclose the specified slave device transmitting specific information for starting used for matching the sampling time in the master device and executing specific computing according to the specified information for returning returned from the master device according to the specific information for starting.

Implementing a multiplexer to specify a device according to a round robin, however, is commonly known in the art as a means for providing fair multiplexing for each device. Thus, at

the time of the invention it would have been obvious to one of ordinary skill in the art to utilize a round robin in a communication network comprising multiplexing means.

Furthermore, Tanaka teaches a system for processing synchronization signals in a communication network whereby a specified slave device (lower hierarchy switching center 25(2), see FIG. 1 and col. 8, lines 33-52) transmits the specific information for starting (i.e., B8 of synchronization signal, see FIG. 4 and col. 8, lines 17-32) used for matching the sampling time in the master device (higher hierarchy switching center 25(1)) and executes specific computing (i.e., computing the lead for multiframe synchronization signal, col. 8, lines 46-52) according to the specified information for returning (propagation delay time in the loop back signal, col. 8, lines 42-46) returned from the master device (higher hierarchy switching center 25(1)) according to the specific information for starting. Tanaka's teachings of synchronization are clearly beneficial to a multiplexing communication network wherein delay time is an important consideration. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply these teachings of Tanaka to a communication network having a master device and a plurality of slave devices transmitting and receiving specific information to and from each other as in FIGS. 16-18.

Regarding claim 2, Tanaka further teaches each of the devices transmitting a general information sampled at each of the matched sampling timing and having fixed length (multiframe synchronization signal represented by bit B7, see col. 8, lines 22-32) in addition to the specific information for starting and specific information for returning at a predetermined cycle.

Regarding claim 3, applicant's FIGS. 16-18 teach a multiplexer (8) comprising a master-side port (11) for connecting the master device (1) thereto and slave side ports (12) for connecting the plurality of slave devices (2) thereto for mutual communication, a master-destined general information receiving unit (16) for receiving the general information from the slave-side ports (via general packet multiplexing bus 14), a master-destined specific information receiving unit (17) for receiving the specific information for starting from each of the slave-side ports (via specific packet multiplexing bus 15), a master-destined information selecting unit (18) for selecting any one of the master-destined general information receiving unit (16) or the master-destined specific information receiving unit (17) and allowing output to the master device (1) according to a prespecified method (see applicant's method of priority, page 8, lines 2-20). Furthermore, a slave-destined broadcasting bus for broadcasting information obtained from the master-side port to all of the slave-side ports as well as a master-destined information multiplexing bus for outputting information to the master-side port is inherent according to FIG. 18. That is, arrows on ports 11 and 12 indicate information being broadcast between the master and slave-side ports and their respective devices which would involve communication means such as broadcasting buses.

Allowable Subject Matter

12. Claims 4-9, 11-12, 14-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2665

13. Claims 10, 13 and 22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,156,798 to Doelz teaches a modular packet communication network with a master-slave(or terminal) configuration, and

U.S. Patent No. 4,926,423 to Zukowski teaches a time-division multiplexed transmission system.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9314 for regular communications and 703.872.9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4750.

Application/Control Number: 09/409,681
Art Unit: 2665

Page 9

Justin M Philpott

jmp
October 4, 2002



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